

## OPINION 1954

*Labrus* Linnaeus, 1758, *Cichlasoma* Swainson, 1839 and *Polycentrus* Müller & Troschel, 1849 (Osteichthyes, Perciformes): conserved by the designation of *Labrus mixtus* Linnaeus, 1758 as the type species of *Labrus* and *L. bimaculatus* Linnaeus, 1758 as the type species of *Cichlasoma*; and *Polycentrus schomburgkii* Müller & Troschel, 1849: specific name given precedence over *L. punctatus* Linnaeus, 1758

**Keywords.** Nomenclature; taxonomy; Osteichthyes; Perciformes; LABRIDAE; CICHLIDAE; NANDIDAE; POLYCENTRIDAE; *Labrus*; *Cichlasoma*; *Polycentrus*; *Labrus mixtus*; *Cichlasoma bimaculatum*; *Polycentrus schomburgkii*; *Polycentrus punctatus*.

**Ruling**

- (1) Under the plenary power:
  - (a) all previous fixations of type species for the following nominal genera are hereby set aside:
    - (i) *Labrus* Linnaeus, 1758 and *Labrus mixtus* Linnaeus, 1758 is designated as the type species;
    - (ii) *Cichlasoma* Swainson, 1839 and *Labrus bimaculatus* Linnaeus, 1758 is designated as the type species;
  - (b) it is hereby ruled that the specific name *schomburgkii* Müller & Troschel, 1849, as published in the binomen *Polycentrus schomburgkii*, is to be given precedence over the name *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus*, whenever the two names are considered to be synonyms.
- (2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  - (a) *Labrus* Linnaeus, 1758 (gender: masculine), type species by designation under the plenary power in (1)(a)(i) above *Labrus mixtus* Linnaeus, 1758;
  - (b) *Cichlasoma* Swainson, 1839 (gender: neuter), type species by designation under the plenary power in (1)(a)(ii) above *Labrus bimaculatus* Linnaeus, 1758;
  - (c) *Polycentrus* Müller & Troschel, 1849 (gender: masculine), type species by monotypy *Polycentrus schomburgkii* Müller & Troschel, 1849.
- (3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  - (a) *mixtus* Linnaeus, 1758, as published in the binomen *Labrus mixtus* and as defined by the neotype (catalogue no. UUZM 193 in the Uppsala University Zoological Museum) designated by Kullander (1997) (specific name of the type species of *Labrus* Linnaeus, 1758);
  - (b) *bimaculatus* Linnaeus, 1758, as published in the binomen *Labrus bimaculatus* and as defined by the holotype (catalogue no. NRM 7 in the Swedish Museum of Natural History, Stockholm) (specific name of the type species of *Cichlasoma* Swainson, 1839);

- (c) *schomburgkii* Müller & Troschel, 1849, as published in the binomen *Polycentrus schomburgkii* and as defined by the two subadult and 28 juvenile syntypes (catalogue nos. ZMB 1024 and ZMB 20604 in the Museum für Naturkunde der Humboldt-Universität, Berlin), with the endorsement that it is to be given precedence over the name *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus*, whenever the two names are considered to be synonyms;
- (d) *punctatus* Linnaeus, 1758, as published in the binomen *Labrus punctatus* and as defined by the lectotype (catalogue no. NRM 4 in the Swedish Museum of Natural History, Stockholm) designated by Kullander (1983), with the endorsement that it is not to be given priority over the name *schomburgkii* Müller & Troschel, 1849, as published in the binomen *Labrus schomburgkii*, whenever the two names are considered to be synonyms.
- (4) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
- (a) *ossifagus* Linnaeus, 1758, as published in the binomen *Labrus ossifagus* (a junior objective synonym of *Labrus mixtus* Linnaeus, 1758);
- (b) *ossifragus* Lönnberg, 1896, as published in the binomen *Labrus ossifragus* (a junior objective synonym of *Labrus ossifagus* Linnaeus, 1758).

#### History of Cases 2880 and 2905

Case 2880, which sought the conservation of the specific name of *Polycentrus schomburgkii* Müller & Troschel, 1848, was received from Dr Hans-Joachim Paepke (*Institut für Systematische Zoologie, Museum für Naturkunde der Humboldt-Universität, Berlin, Germany*) on 22 February 1993. After correspondence the case was published in BZN 50: 215–218 (September 1993). Case 2905, which sought the conservation of *Labrus* Linnaeus, 1758, *Cichlasoma* Swainson, 1839 and *Polycentrus* Müller & Troschel, 1848, was received from Dr R. Fricke (*Staatliches Museum für Naturkunde, Stuttgart, Germany*) and Dr C.J. Ferraris (*California Academy of Sciences, San Francisco, California, U.S.A.*) on 28 September 1993 and, after correspondence, was published in BZN 53: 106–111 (June 1996). Notice of the cases was sent to appropriate journals.

Case 2905 concerned the designation of type species for two genera of fish, *Labrus* Linnaeus, 1758, the wrasses from the Atlantic and Mediterranean (family LABRIDAE) and *Cichlasoma* Swainson, 1839, cichlids from South America (family CICHLIDAE). Commission action was needed to maintain stability and universality in the usages of these generic names and of *Polycentrus* Müller & Troschel, 1849, leaf fishes from South America (family NANDIDAE or POLYCENTRIDAE).

Under the provisions of the Code the type species of *Cichlasoma* was *Labrus punctatus* Linnaeus, 1758 by monotypy; the name-bearing type of *Labrus* was the nominal species *L. bimaculatus* Linnaeus, 1758 by subsequent designation by Jordan (1891). *Labrus punctatus* was long recognised as composite, being based on Gronovius's (1754) description of a member of the CICHLIDAE, identified by subsequent authors as *Cichlasoma bimaculatum* (Linnaeus, 1758), and on a single specimen in the Museum Adolphi Friderici collection in Stockholm identified as *Polycentrus schomburgkii* Müller & Troschel, 1849 (family NANDIDAE or POLYCENTRIDAE). Swainson's (1839) use of the nominal taxon *Labrus punctata* [sic]

'Bloch, 1792' for the single species on which he based *Cichlasoma* clearly referred to *C. bimaculatum*. However, in 1983 Dr Sven Kullander designated the Stockholm nandid/polycentrid specimen of *L. punctatus* as the lectotype, thereby inadvertently transferring the names *Cichlasoma* and *punctatus* to the NANDIDAE (or POLYCENTRIDAE) and rendering the names senior subjective synonyms of *Polycentrus* and *P. schomburgkii*. The holotype of *L. bimaculatus* was identified (Fernholm & Wheeler, 1983) as a cichlid belonging to *Cichlasoma*; the names *Labrus* and LABRIDAE Bonaparte, [1832] were thus formally senior subjective synonyms of *Cichlasoma* and CICHLIDAE Bleeker, 1859 (para. 4 of the application).

In their application Fricke & Ferraris sought to keep *Labrus punctatus* and *L. bimaculatus* as the type species of *Cichlasoma* and *Labrus* respectively but, by neotype designations, to change the taxonomic meanings of the specific names to conform with the current usages of the generic names. This required that both Kullander's (1983) lectotype designation for *punctatus* and the status of the holotype of *bimaculatus* be set aside.

The comments received on this case all supported action by the Commission to stabilise the usages of the names *Labrus*, *Cichlasoma* and *Polycentrus*, but consistently opposed the procedure followed by Fricke & Ferraris (i.e. the designation of neotypes for *L. punctatus* and *L. bimaculatus*). Comments from Dr Reeve M. Bailey (*Museum of Zoology, University of Michigan, Ann Arbor, Michigan, U.S.A.*) and from Dr Sven Kullander (*Swedish Museum of Natural History, Stockholm, Sweden*) were published in BZN 54: 106–115 (June 1997); comments from Dr Maurice Kottelat (*Cornol, Switzerland*) and from Mr Alwyne Wheeler (*The Natural History Museum, London, U.K.*) were published in BZN 55: 237–239 (December 1998). These authors all proposed that, in accord with current and universal understanding of the genera, usage by the majority of authors and the type material, the unambiguous *Labrus mixtus* (defined by the neotype designated by Kullander, 1997) be designated the type species of *Labrus*, and *L. bimaculatus* (defined by the holotype) be designated the type species of *Cichlasoma*.

In Case 2880 Dr Paepke proposed that the specific name of *Labrus punctatus*, as defined by Kullander's (1983) nandid/polycentrid lectotype, be suppressed in order to conserve the name *Polycentrus schomburgkii* on the grounds that *punctatus* was virtually unused (in either the NANDIDAE/POLYCENTRIDAE or the CICHLIDAE). Paepke's application was supported by Dr Bailey (BZN 54: 106), but Dr Kullander (BZN 54: 110–111) considered that suppression of *punctatus* was premature and that, with the present state of knowledge on speciation within *Polycentrus* (family NANDIDAE or POLYCENTRIDAE), both *punctatus* and *schomburgkii* should be retained in the NANDIDAE (or POLYCENTRIDAE). Accordingly, Dr Paepke (BZN 54: 188–189, September 1997) modified his application to propose that, if the names are considered to be synonyms, *schomburgkii* should be given precedence over *punctatus*, rather than that the latter be suppressed.

In June 1997 copies of the comments by Bailey and Kullander were sent to Drs Fricke and Ferraris with a request for a reply. In September 1999 they were sent copies of both original applications and of all the comments on these two cases. Dr Ferraris's reply, received on 27 November 1999, was quoted on the voting paper: 'When Ronald Fricke and I prepared our application, we recognized that there were two alternative courses of action that would achieve our primary goal of stabilizing

the family names LABRIDAE and CICHLIDAE. Both courses required Commission action. It was our understanding that the only way to begin the process of Commission action was to present the problem, and a workable solution, to the Commission for their consideration. After several rounds of e-mail debate, Fricke and I settled on one solution and prepared our proposal.

It did not come as a surprise that the alternative proposal considered by Fricke and myself was offered in comment. Sven Kullander's critique of our proposal accurately depicted the alternative that Fricke and I previously rejected as somewhat more cumbersome. However, Kullander's suggested alternative does provide an acceptable resolution to my primary concern about the stability of the two family-group names.

Thus, when considering Case 2905, I urge the Commission to place as its top priority the resolution of this unstable situation. If the Commission votes to reject the solution as proposed in Case 2905, then I urge the members to vote immediately to adopt the alternative proposal of Kullander. Simply rejecting Case 2905, without providing a solution to the underlying problem, would unacceptably prolong a problem that Fricke and I first tried to bring to the attention of the Commission in 1993.

It must be noted here that adoption of Kullander's proposal would not necessarily resolve Case 2880. Although the proposal Fricke and I outlined in Case 2905 forced a solution to Case 2880, Kullander's proposal leaves open the possibility that the Commission can accommodate Paepke's (1997) effort to preserve the junior subjective synonym *Polycentrus schomburgkii* Müller & Troschel, 1849 over *Labrus punctatus* Linnaeus, 1758 by using its plenary power to give precedence to the former name'.

Since Cases 2880 and 2905 were interrelated they were submitted together for voting.

Both the courses originally presented by Fricke & Ferraris in Case 2905 (to set aside the original type material of *Labrus binaculatus* and *L. punctatus* and to designate neotypes to align these nominal species with the current usages of *Labrus* and *Cichlasoma* respectively, set out in BZN 53: 109), and by Bailey, Kullander, Kottelat and Wheeler in their comments (to designate *L. mixtus* as the type species of *Labrus* and *L. binaculatus* as the type of *Cichlasoma*, set out comprehensively by Kullander in BZN 54: 114), required Commission action. These were offered for voting as alternatives (Proposals A and B respectively) in Vote 1.

The revised proposals for Case 2880 (set out in BZN 54: 188–189) were submitted for voting as Vote 2. Commissioners were asked to vote for or against giving the specific name of *Polycentrus schomburgkii* precedence over *Labrus punctatus* in the NANDIDAE/POLYCENTRIDAE in the event of approval of Proposal B in Vote 1 (a majority for Proposal A would result in removal of *punctatus* from the NANDIDAE/POLYCENTRIDAE).

### Decision of the Commission

On 1 December 1999 the members of the Commission were invited to vote as set out above. At the close of the voting period on 1 March 2000 the votes were as follows:

Vote 1. Proposal A (set out in BZN 53: 109) — 1: Cocks

Proposal B (set out in 54: 113–114, and in part in BZN 54: 108–109, proposals (1)(b)(i)–(iii), (2)(a)–(b) and (3)(a)–(b)) — 19: Bock, Bouchet, Brothers, Cogger, Eschmeyer, Heppell, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song, Štys.

Dupuis and Kerzhner abstained.

Vote 2. Affirmative votes — 17: Bock, Cocks, Cogger, Eschmeyer, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Minelli, Nielsen, Papp, Patterson, Ride, Savage, Schuster, Song

Negative votes — 4: Bouchet, Brothers, Heppell and Štys.

Dupuis abstained.

No vote was received from Mawatari.

Lehtinen was on leave of absence.

In relation to Case 2905 (Vote 1), Kerzhner commented: 'In proposal B it is proposed that all previous fixations of type species for *Labrus* and *Cichlasoma* be set aside. It should be recorded, however, that Jordan's (1891) unfortunate type designation was not the earliest for *Labrus*. *Labrus mixtus*, which is now proposed as the type, was designated as such by Chenu (1856, *Encyclopédie d'Histoire Naturelle*, Reptiles et Poissons, p. 266) and, still earlier, Valenciennes (1842, in Cuvier's *Règne animal*, 'Disciples' edition, Poissons, pp. 192–193, pl. 86) designated as type species *Labrus merula* Linnaeus, 1758 by figuring this single species of the genus in the Atlas to the work, which contains in its title the statement 'planches gravées, représentant les types de tous les genres'. In relation to the revised proposals for Case 2880 (Vote 2), Brothers commented: 'I am not convinced that the complexities involved in giving one name (*Polycentrus schomburgkii*) precedence over another (*Labrus punctatus*) are warranted in this case'.

## Original references

The following are the original references to the names placed on Official Lists and an Official Index by the ruling given in the present Opinion:

*bimaculatus*, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 285.

*Cichlasoma* Swainson, 1839, *The natural history of fishes, amphibians and reptiles, or monocardian animals*, vol. 2, p. 230.

*Labrus* Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 282.

*mixtus*, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 287.

*ossifagus*, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 286.

*ossifragus*, *Labrus*, Lönnberg, 1896, *Bihang till Kongliga Svenska Vetenskap-Akademiens Handlingar*, 22(4, 1): 42.

*Polycentrus* Müller & Troschel, 1849, *Fische in Schomburgk*, M.R., *Reisen in Britisch-Guiana in den Jahren 1840–1844 ...*, part 3 (*Versuch einer Zusammenstellung der Fauna und Flora von Britisch-Guiana*), no. 1 (Fauna), p. 622.

*punctatus*, *Labrus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 285.

*schomburgkii*, *Polycentrus*, Müller & Troschel, 1849, *Fische in Schomburgk*, M.R., *Reisen in Britisch-Guiana in den Jahren 1840–1844 ...*, part 3 (*Versuch einer Zusammenstellung der Fauna und Flora von Britisch-Guiana*), no. 1 (Fauna), p. 622.

The following is the reference for the designation of the lectotype of *Labrus punctatus* Linnaeus, 1758:

**Kullander, S.O.** 1983. *A revision of the South American cichlid genus Cichlasoma (Teleostei: Cichlidae)*, p. 84.

The following is the reference for the designation of the neotype of *Labrus mixtus* Linnaeus, 1758:

**Kullander, S.O.** 1987. BZN 54: 113.